

THE ROLE OF ENVIRONMENTAL POLLUTANTS IN THE CAUSATION OF BIRTH DEFECTS IN CALI, COLOMBIA: DEVELOPMENT OF A RESEARCH STRATEGY WITH AN INTERDISCIPLINARY APPROACH

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Background and Aims: In Cali, Colombia, clusters of very rare congenital defects were reported at a hospital-based registry and subsequent evaluation demonstrated a 5 to 10 fold prevalence increase of other birth defects including vascular disruption defects (VDD) and neural tube defects (NTD). An inadequately managed municipal landfill site and a polluted river with different sources of contamination were hypothesized as potential environmental sources of teratogens. Our aim is to provide a framework and strategy for assessing concerns about the role of environmental pollutants in causing birth defects in a locality.

Methods: A multidisciplinary team designed and implemented a comprehensive study aimed to describe social and environmental conditions of the area, and to determine risk factors of birth defects.

Results: The steps for developing such integrated approach are presented, including the definition of common gaps of knowledge inside the research team. Key questions arising during study implementation are: How better integrating methodological issues? How constructing a pathway model for research? How defining a risk communication strategy? What analytical tools are fundamental?

Conclusions: We support the notion that synergistic efforts from different disciplines are required to better understand causes and also to help making decisions